

## CLAIMS

1. A particle beam image detector employing gas amplification attained by pixel-type electrodes, characterized by comprising:

(a) anode strips formed on the back surface of a double-sided substrate,

(b) columnar anode electrodes which are planted in the anode strips such that their upper ends penetrate the double-sided substrate so as to be exposed to a surface thereof, and

(c) strip-shaped cathode electrodes each having an aperture such that each of the corresponding columnar anode electrodes falls therein, the radius of the aperture is similar to the thickness of the said substrate, and the diameter of the aperture is smaller than the width of the said anode strip so that the direction of the line of electric force is always upward at an insulator surface, eliminating any risk of generating the undesired electrostatic field caused by accumulation of positive ions generated through gas amplification.

2. The particle beam image detector employing gas amplification attained by pixel-type electrodes as recited in claim 1, wherein each of the anode strips has a width of about 200 to 400  $\mu\text{m}$ .

3. The particle beam image detector employing gas amplification attained by pixel-type electrodes as recited in claim 1, wherein the anode strips are provided at intervals of about 400  $\mu\text{m}$ , the strip-shaped cathode electrodes each

have apertures at intervals of a predetermined distance, the diameter of the aperture being about 200 to 300  $\mu\text{m}$ , and each of the columnar anode electrodes has a diameter of about 40 to 60  $\mu\text{m}$  and a height of about 50 to 150  $\mu\text{m}$ .